CSV and GIS Technical Guidelines

& examples for Provider Submission Data Portal

The preferred file format for reporting Fixed Broadband data is in CSV or comma-delimited text file. Each value is separated by commas and stored in a simple text file with the .csv file extension.

All fixed broadband providers are required to report coverage by address. For simplicity and enhanced anonymity, providers are highly suggested to use the unique identifier of all addresses from the Virginia Geographic Information Network (VGIN). Providers can download the VGIN shapefile from the VGIN Site Address Point database. VGIN's shapefiles have the full addresses for providers to match up with the ADDRESS_POINT_ID. Failure to provide address information in the format of ADDRESS_POINT_ID may result in an incorrect submission.

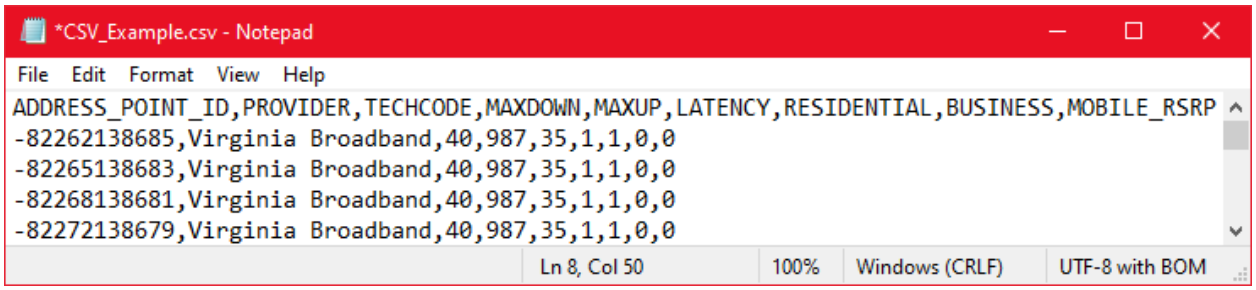
Table 1: Fields in Provider Submitted Data.

Field	Description	Type (GIS)	Example
ADDRESS_POINT_ID	VGIN Unique Identifier for every address in Virginia	Text	-82139138605
PROVIDER	Internet Service Provider, Name of the entity customers could contact to purchase service in this area	Text	Comcast Corporation
TECHCODE	Technology of Transmission FCC Form 477 guideline (https://transition.fcc.gov/form477/FBS/formatting_fbs.pdf): 10 = Asymmetric xDSL 20 = Symmetric xDSL* 30 = Other Copper Wireline (all copper-wire based technologies other than xDSL; Ethernet over copper and T-1 are examples) 40 = Cable Modem 50 = Optical Carrier / Fiber to the end user (Fiber to the home or business end user, does not include "fiber to the curb") 60 = Satellite 70 = Terrestrial Fixed Wireless 83 = (Mobile Only) 4G/LTE 89 = (Mobile Only) 5G 90 = Electric Power Line 0 = All Other	Integer (short)	40
MAXDOWN	Maximum advertised download speed provided to location (in	Float	987

	Mbps)		
MAXUP	Maximum advertised upload speed provided to location (in Mbps)	Float	35
LATENCY	Meets the requirement of less than or equal to 100ms, based on the 95th percentile of measurement? 0 for No; 1 for Yes	Text	1
RESIDENTIAL	Is the service provided at this location a residential address? = 0 for No; 1 for Yes	Text	0
BUSINESS	Is the service provided at this location a business address? = 0 for No; 1 for Yes	Text	1
MOBILE_RSRP	RSRP values at address in 10dB increments or finer. Between -50 dBm and -120 dBm (0 for non-mobile providers) (in dBm)	Integer (short)	0

The CSV (comma-delimited) file should look like this in Notepad or other similar simple text editors. The fields should be as follows:
ADDRESS_POINT_ID,PROVIDER,TECHCODE,MAXDOWN,MAXUP,LATENCY,RESIDENTIAL,BUSINESS,MOBILE_RSRP

Image 1: Example CSV file opened in Microsoft Notepad.



GIS Standards

1. The shapefiles should be in points. If using polygons, all map areas will need to have complete polygons with single unique identifiers. They should be closed and non-overlapping. The polygons should only cover the addresses with broadband coverage.
2. The geometries should conform to the two-dimensional OGC (Open Geospatial Consortium) rules.
3. The shapefiles must include .shp, .shx, .dbf, and .prj files.
4. The shapefiles must use NAD 1983 geographic coordinates and VA_Lambert_Conformal_Conic projected coordinate system.
5. The shapefiles should be submitted with the following fields:

OBJECTID: *Automatically generated by GIS software* = Object ID
PROVIDER = Text
ADDRESS_POINT_ID = Text
TECHCODE = Integer
MAXDOWN = Float
MAXUP = Float
LATENCY = Text
RESIDENTIAL = Text
BUSINESS = Text
MOBILE_RSRP = Text

Image 2: Fields Table in ArcGIS Pro.

Visible	Read Only	Field Name	Alias	Data Type	Allow NULL	Highlight	Number Format	Domain	Default	Length
☑	☑	OBJECTID	OBJECTID	Object ID	☐	☐	Numeric			
☑	☐	ADDPTKEY	ADDRESS_POINT_ID	Text	☑	☐				20
☑	☐	PROVIDER	PROVIDER	Text	☑	☐				255
☑	☐	TECHCODE	TECHCODE	Short	☑	☐	Numeric			
☑	☐	MAXDOWN	MAXDOWN	Float	☑	☐	Numeric			
☑	☐	MAXUP	MAXUP	Float	☑	☐	Numeric			
☑	☐	LATENCY	LATENCY	Text	☑	☐				1
☑	☐	RESIDENTIAL	RESIDENTIAL	Text	☑	☐				1
☑	☐	BUSINESS	BUSINESS	Text	☑	☐				1
☑	☐	MOBILE_RSRP	MOBILE_RSRP	Short	☑	☐	Numeric			

Image 3: Example Attributes Table Displayed in ArcGIS Pro.

	OBJECTID *	ADDRESS_POINT_ID	PROVIDER	TECHCODE	MAXDOWN	MAXUP	LATENCY	RESIDENTIAL	BUSINESS	MOBILE_RSRP
1	32	-82139138605	Comcast Corportation	40	987	35	1	0	1	0
2	43	-82108138622	Comcast Corportation	40	987	35	1	1	0	0
3	44	-82104138624	Comcast Corportation	40	987	35	1	1	0	0
4	34	-82100138626	Comcast Corportation	40	987	35	1	1	0	0
5	40	-82097138628	Comcast Corportation	40	987	35	1	1	0	0
6	33	-82110138627	Comcast Corportation	40	987	35	1	1	0	0
7	38	-82106138628	Comcast Corportation	40	987	35	1	1	0	0
8	37	-82103138	Comcast Corportation	40	987	35	1	1	0	0
9	36	-82099138 2	Comcast Corportation	40	987	35	1	1	0	0
10	35	-821121386	Comcast Corporation	40	987	35	1	1	0	0
11	41	-8210813863	Comcast Corportation	40	987	35	1	1	0	0
12	42	-82105138635	Comcast Corportation	40	987	35	1	1	0	0
13	39	-82102138637	Comcast Corportation	40	987	35	1	1	0	0
14	45	-82073138641	Comcast Corportation	40	987	35	1	1	0	0